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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,862	11/12/2003	Tsutomu Ogihara	035576/271443	6724
826	7590	11/22/2004	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			ZEMEL, IRINA SOPHIA	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/706,862	Applicant(s) OGIHARA ET AL.
	Examiner Irina S. Zemel	Art Unit 1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 4-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is indefinite if undue experimentation is involved to determine boundaries of protection. This rationale is applicable to films or devices "obtainable" or "formable" by a stated process because any variation in any parameter within the scope of the claimed process would change the produced film/device. One who made or used a film/device made by a process other than the process cited in the claim would have to produce a film/device using all possible parameters within the scope of the claim, and then extensively analyze each product to determine if this product was obtainable by a process within the scope of the claimed process. See *Ex parte Tanksley*, 26 USPQ 2d 1389.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1- 8 are rejected under 35 U.S.C. 102(e) as being anticipated by WO 03/088344 Honeywell International, Inc., (hereinafter "Honeywell"), filed as PCT/US02/15256 on April 10, 2002 designating US and published in English language.

Honeywell discloses nanoporous films obtained from compositions containing siloxane monomer or polymers precursor (see page 13, lines 5-7), and quaternary ammonium compounds such as tetraethyleammonium acetate. See illustrative examples 4,6,8, etc. The reference explicitly teaches that film formin compositions according to the invention include compositions based on polymeric siloxanes obtained by hydrolysis of organosilanes, and the suitable polymers have the number average molecular weight as high as 300,000amu, which overlaps with the claimed molecular weight range as per claims 2 and 7. The reference further expressly discloses that films are obtained by application of a substrate a compositions containing siloxanes and quaternary ammonium compounds and heating the composition to obtain a film. The films are suitable, as explicitly disclosed by the reference, for semiconductor devices (see abstract) and interlayer dielectric films. See, for example, page 24, lines 8-14.

Therefore, the invention as claimed in claims 1-8 is fully anticipated by the disclosure of Honeywell.

Applicants should further note that the film used in the semiconductor device of claim 6 is claimed in a "product-by-process" format, and the limitations of claims 6 are met by any film formed from the claimed composition regardless of the method it was produced. In the methods disclosed in illustrative examples, even if the original prepolymers were low molecular weight precursors, the siloxane precpolymers were

polymerized upon heat treatment in the presence of as tetraethyleammonium acetate and inherently resulted in cured films containing high molecular weigh polymer and as tetraethyleammonium acetate, which are substantially the same as the claimed films. Thus, the invention as claimed in claims 6-8 is further anticipated by the illustrative examplesdiscussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Irina S. Zemel
Examiner
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